

II. CLAIM AMENDMENTS

1. (Currently Amended) A power control method in a mobile system based at least partly on a spread spectrum technique and having at least one mobile station and at least one base station, wherein characterised in that the transmit power of more than one bearer is determined at a time with the aid of the method, and that the method comprises comprising steps, in which

forming a control function is formed at least partly on the basis of a quantity which at least partly represents the control history fast fading experienced by at least one bearer, and

calculating the control function is calculated in order to determine new output power values of said more than one bearer.

2. (Currently Amended) A method according to claim 1, wherein characterised in that the control function is formed at least partly on the basis of an at least partial history of the power control of at least one bearer.

3. (Currently Amended) A method according to claim 1, wherein characterised in that the transmit power of more than one bearer is determined with the aid of the method when the transmission of at least one bearer is initiated.

4. (Currently Amended) A method according to claim 1, further comprising characterised in that it comprises a step in which determining the transmit power of

more than one bearer is determined when the transmission of at least one bearer is terminated.

5. (Currently Amended) A method according to claim 1, further comprising characterised in that it comprises a step in which determining the transmit power of more than one bearer is determined when the transmit power of at least one bearer changes.

6. (Currently Amended) A method according to claim 1, further comprising characterized in that it comprises a step in which determining the transmit power of more than one bearer is determined when the target level of the correctness of at least one bearer changes.

7. (Currently Amended) A method according to claim 1, further comprising characterised in that it comprises a step in which determining the transmit power of more than one bearer is determined when the transmission rate of at least one bearer changes.

8. (Currently Amended) A method according to claim 1, further comprising characterised in that it comprises a step in which determining the transmit power of more than one bearer is determined when at least one base station of at least one bearer is changed in a macro diversity combination.

9. (Currently Amended) A method according to claim 1, wherein characterised in that the control function is at least partly formed on the basis of the desired correctness levels of the bearers.

10. (Currently Amended) A method according to claim 1, ~~characterised in that it further comprising checking comprises a step in which it is checked whether each determined output power value is within the range formed by the typical minimum and maximum limits of the respective bearer, whereby the output power values are taken in use if no one of the values is outside said region.~~

11. (Cancelled)

12. (Currently Amended) A method according to claim 19 ~~characterised in that it further comprising setting comprises a step, in which, at least one element value is set to zero, when the value of said element is below a certain predetermined limit.~~

13. (Currently Amended) A method according to claim 1, ~~further comprising characterised in that~~

~~controlling the output powers of more than one base station and the mobile stations managed by these base stations are controlled with the method, and that~~

~~forming the control function is formed at least partly also on the basis on how strong the signal of each base station is received in at least one mobile station of each other base station.~~

14. (Cancelled)

15. (Currently Amended) A method according to claim 1, ~~characterised in that it further comprises a step, in which comprising making a decision is made on the basis of the generated output power values for allowing the transmission of at least one bearer.~~

16. (Currently Amended) An element of a mobile system, said element comprising characterised in that it comprises

a device means to generate a quantity which at least partly depends on the control history fast fading experienced by at least one bearer,

a device means to determine the output power values for more than one bearer at least partly on the basis of said quantity, and

a device means to control the output power of at least one bearer on the basis of said output power values.

17. (Withdrawn) A load control method in a mobile network, characterised in that it comprises steps, in which

a power vector is calculated in order to generate candidate values to be used as powers at the beginning of the next calculation period;

a check is made whether the power load exceeds a predetermined limit, whereby if the power load exceeds said predetermined limit, at least one of the following is decreased:

the transmit power of at least one transmission,

the bit rate of at least one transmission, and

the SIR target level of at least one transmission;

whereby said at least one transmission is selected on the basis of which transmission has a corresponding candidate power value in the power vector

with the greatest ratio to the number of correctly received bits of said transmission during the previous calculation period.

18. (Withdrawn) A method to manage the transmit powers of bearers in a mobile network, characterised in that

the powers of the bearers are at least partly controlled in clusters,

the clusters of each bearer is determined according to the state of the bearer, and that the method comprises steps, in which

a power vector is calculated in order to generate candidate values to be used as powers at the beginning of the next calculation period,

the transmit power of at least one bearer cluster is changed in accordance with the calculated candidate values.

19. (Previously Presented) A power control method in a mobile system based at least partly on a spread spectrum technique and having at least one mobile station and at least one base station, wherein the transmit power of more than one bearer is determined at a time with the aid of the method, and wherein the method comprises steps, in which a control function is formed at least partly on the basis of a quantity which at least partly represents the fast fading experienced by at least one bearer,

the control function is calculated in order to determine new output power values of said more than one bearer,

an interference effect matrix is generated, which represents the mutual interference of different bearers, and

the generated interference effect matrix is inverted in order to form the new power levels.

20. (Previously Presented) A power control method in a mobile system based at least partly on a spread spectrum technique and having at least one mobile station and at least one base station, wherein the transmit power of more than one bearer is determined at a time with the aid of the method, and wherein the method comprises steps, in which a control function is formed at least partly on the basis of a quantity which at least partly represents the fast fading experienced by at least one bearer, and

the control function is calculated in order to determine new output power values of said more than one bearer,

more than one set of output power values is calculated,

a utility function is formed in order to select one set of output power values, and

the set of output power values is selected, which minimizes the value of said utility function.